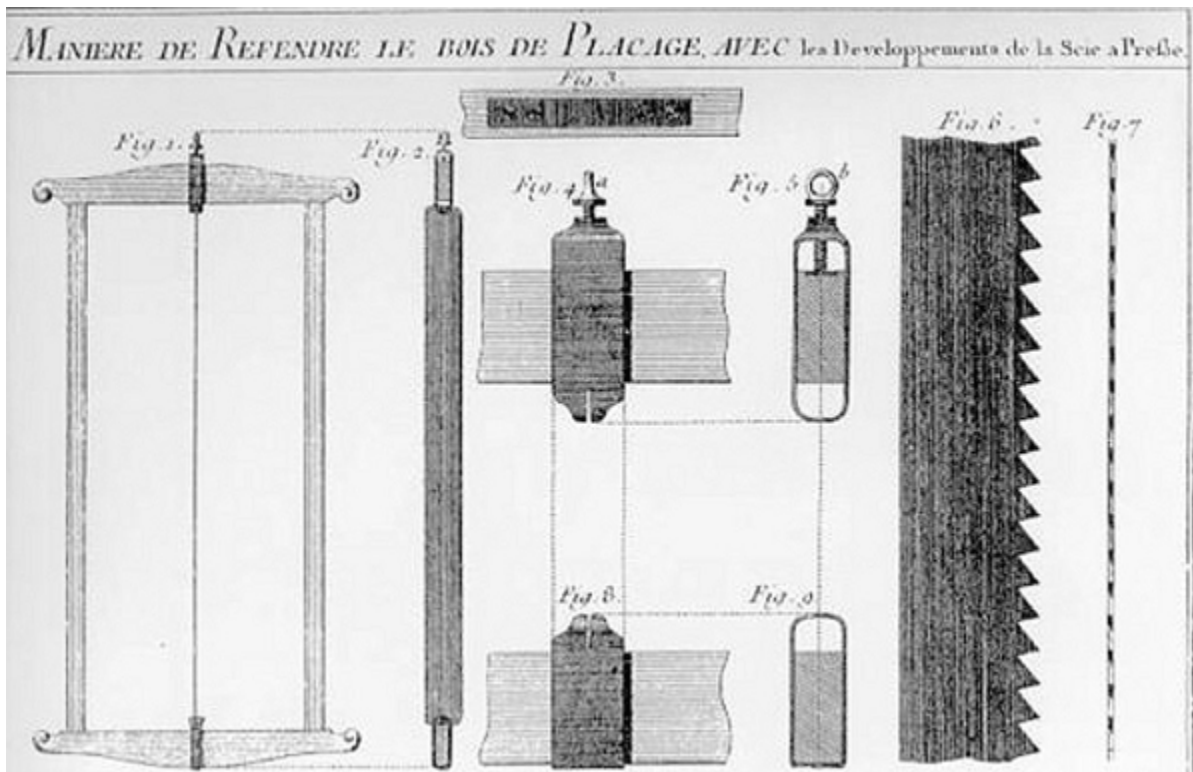


BLACKBURN

SIMPLY CLASSIC

Frame Saw Sharpening & Tips for Use



MADE IN THE USA ♦ Fully warranted for one year

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SHARPENING

Required tools and equipment

- ◆ Saw vise
- ◆ File for jointing teeth
- ◆ Jointing guide
- ◆ Dykem, Sharpie, or other way to color teeth
- ◆ 8" (for 4 1/2 ppi blades) or 10" (for 3 1/3 ppi) taper saw file
- ◆ Saw set (Stanley 42 is my set of choice)
- ◆ Diamond or oilstone (for side dressing teeth)

1. Prepare for sharpening* - Before jointing the saw, file the untoothed portions of the blade so that they are below the level of the toothline (Figure 1). If this is not done, the teeth towards the ends will be jointed less than those towards the center of the blade, resulting in a concave toothline.

*All blades shipped after January 2015 (and some earlier ones) had this step done before they were shipped. For those blades, this step can be skipped for the initial sharpening. Check the height of the ends before subsequent sharpenings and adjust if necessary.

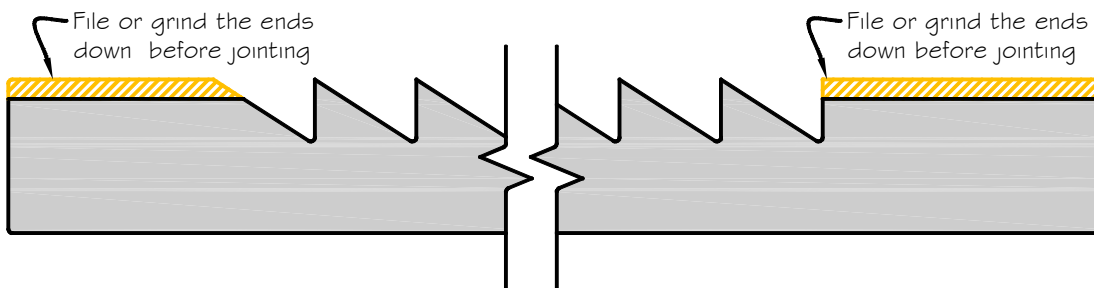


Figure 1. File ends down before jointing.

2. Joint the teeth - Joint the teeth until a flat of about 1/32" - 1/16" is present on the tip of each tooth (Figure 2).

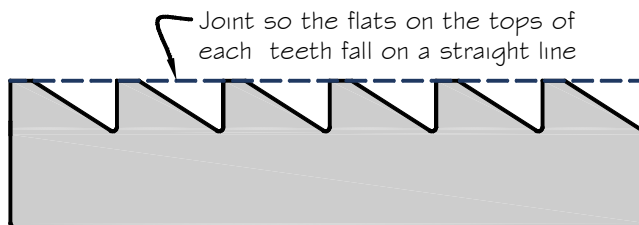


Figure 2. Joint the teeth.



3. Mark the teeth - Apply Dykem or permanent marker to all surfaces of the teeth that will be filed.

4. File the teeth - Place the saw in the vise, with the teeth just above the jaws. If the saw is oriented as shown below, begin filing at the leftmost tooth, and proceed towards the right. Right-handed filers may find it easier to flip the saw around and file from right to left. I file each tooth in order, without skipping every other one, eliminating the need to flip the blade around halfway through the job.

Because the teeth have little or no rake, very little material is removed from the front surface of each tooth (Figure 3), the file instead moving very nearly straight down as it cuts. File each tooth until the flat on the left side of the file is just removed, and no further, then proceed to the next.

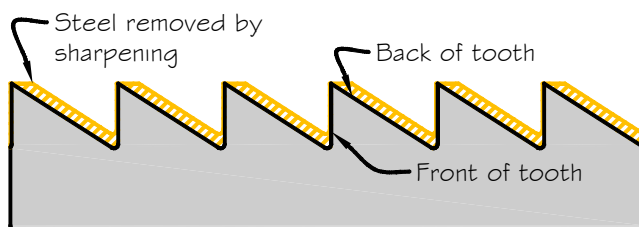


Figure 3. Showing the steel which is removed during sharpening.

5. Set the teeth - My preferred set for these blades is a Stanley No. 42 (**not** the 42X), although others will work. Set every other tooth, then turn the saw around and set the remaining teeth. It may be helpful to mark every other tooth before beginning to prevent setting the wrong tooth.

The amount of set needed will vary depending on the species and dryness of the wood you will be cutting. As a very general guide, set should be in the range of one-fourth to one-third the thickness of the saw blade. For a 0.042" thick blade, this works out to 0.010" – 0.014" of total set (0.005" – 0.007" per side). The more set the teeth have, the more you will be able to steer the saw and correct misdirection. But this does come with a price; more effort will be required, and the cut will be less clean. Given the nature of the cuts these saws are used for, this price is usually acceptable, particularly when cutting wide and/or long boards.

Because setting the teeth changes their geometry, it is strongly recommended that steps 1-3 be repeated now for best performance.

6. Stone the teeth - To ensure that all teeth are evenly set, lightly stone each side of the teeth. Lay the blade on its side on a flat surface and lightly run a stone (oil, India, or diamond) across the tips of the teeth, running the length of the blade. Use no more than one or two light passes along each side at this time.

7. Fine tune the teeth - Make a few test cuts. If there is a consistent tendency for the saw to drift to one side or another, check for twist in the blade (use the arms as winding sticks as described in point 2 of Tips For Use below), and correct if present. If the problem persists, the teeth may be overset on the side it drifts to. Lightly stone that side, then repeat the test cuts. Repeat as needed until the saw runs true.



TIPS FOR USE

1. Workholding - Successful sawing begins with good workholding. Your bench must be rigid and heavy enough (or anchored to something solid) to resist the significant forces generated by pushing large teeth through wood.

2. Saw preparation - Lift rated eyebolts are used so that you can insert a lever (large screwdriver, holdfast, socket extension, or any other handy object) through the eye to fully and properly tension the blade. When properly tensioned, the arms will be bowed slightly, and the blade will sing a bit when plucked.

Check for twist in the blade. The easiest way to do this is to sight down the length of the assembled saw, using the arms as winding sticks; when they are parallel, the blade should be untwisted. If they are out of wind, simply twist one end until they are aligned. It is wise to check this periodically.

3. Starting the saw - The front end of the blade has an untoothed length of about 1 1/2". Starting your stroke on this section allows you to get a running start before the teeth are engaged. This is much easier and more accurate than trying to start the cut in the middle of the blade.

4. Sawing - Cut with the far end of the saw as much as possible. The more that end overhangs the work, the more you need to push down on your end of the saw. Using your energy to support the saw instead of pushing it forward is tiring and inefficient.

Use long, steady strokes, pushing with your whole body, and not just your arms. By rocking your body forward as you push with your arms, you engage your entire body and generate more power.

It is helpful to turn the work around periodically so that you are cutting from both sides. This helps prevent the cut from wandering on the back side where it cannot be seen.

Revised 27 November 2015